

Missouri Department of Natural Resources

PUBLIC NOTICE

APPLICATION FOR MISSOURI STATE OPERATING PERMIT

DATE: August 25, 2006

In accordance with the state Clean Water Law, Chapter 644, RSMo, Clean Water Commission regulation 10 CSR 20-6.010, and the federal Clean Water Act, the applicants listed herein have applied for authorization to either discharge to waters of the state or to operate a no-discharge wastewater treatment facility. The proposed permits for these operations are consistent with applicable water quality standards, effluent standards and/or treatment requirements or suitable timetables to meet these requirements (see 10 CSR 20-7.015 and 7.031). All permits will be issued for a period of five years, unless noted otherwise in the Public Notice for that discharge.

On the basis of preliminary staff review and the application of applicable standards and regulations, the Missouri Department of Natural Resources (MDNR), as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions. The proposed determinations are tentative pending public comment.

Persons wishing to comment on the proposed effluent limitations and/or determinations are invited to submit them in writing to the Department of Natural Resources, Northeast Regional Office, 1709 Prospect Drive, Macon, MO 63552, ATTN: G. Irene Crawford, Regional Director. Please include the permit number in all comment letters.

Comments should be confined to the issues relating to the proposed action and permit(s) and the effect on water quality. The MDNR may not consider as relevant comments or objections to a permit based on issues outside the authority of the Clean Water Commission, (see <u>Curdt v. Mo. Clean Water Commission</u>, 586 S.W.2d 58 Mo. App. 1979).

All comments must be postmarked by September 25, 2006, or received in our office by 5:00 p.m. on September 28, 2006. The requirement of a signed document makes it impossible to accept email comments for consideration at this time. Comments will be considered in the formulation of all final determinations regarding the applications. If response to this notice indicates significant public interest, a public meeting or hearing may be held after due notice for the purpose of receiving public comment on the proposed permit or determination. Public hearings and/or issuance of the permit will be conducted or processed according to 10 CSR 20-6.020.

Copies of all draft permits and other information including copies of applicable regulations are available for inspection and copying at DNR's website, http://www.dnr.mo.gov/env/wpp/index.html, or at the Department of Natural Resources, Northeast Regional Office, 1709 Prospect Drive, Macon, Missouri 63552

Public Notice Date: August 25, 2006					
	er: MO-0124141				
	egional Office				
FACILITY NAME AND ADDRESS	NAME AND ADDRESS OF OWNER				
MFA Agri Service-Cedar Creek	MFA Incorporated				
2887 Callaway County Road 269	201 Ray Young Drive				
Columbia, MO 65201	Columbia, MO 65201				
RECEIVING STREAM & LEGAL DESCRIPTION	TYPE OF DISCHARGE				
Unnamed tributary to Cedar Creek (U)					
Cedar Creek (C)(00737) 303(d)	Domestic, reissuance				
Sec. 11, T48N, R11W, Callaway County					

STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES



In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92,000,92nd Congress) as amended,

Permit No.

MO- 0124141

Owner:

Address:

MFA Incorporated 201 Ray Young Drive, Columbia, MO 65201

Continuing Authority: Same as above Address: Same as above

Facility Name: MFA Agri Service

Facility Address: 2887 Callaway County Road 269, Columbia, MO 65202

Legal Description: SW 1/4, NW 1/4, Sec. 11, T48N, R11W, Callaway County

Latitude/Longitude: +3857338/-09207552

Receiving Stream: Unnamed tributary to Cedar Creek (U) First Classified Stream and ID: Cedar Creek (C) (00737) 303(d)

USGS Basin & Sub-watershed No.: (10300102-190001)

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

Outfall #001 - Warehouse - SIC #4952

Two-cell lagoon / sludge is retained in lagoon.

Design population equivalent is 3.

Design flow is 150 gallons per day.

Design sludge production is 0.045 dry tons/year.

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

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Effective Date	Doyle Childers, Director, Department of Natural Resources Executive Secretary, Clean Water Commission
Expiration Date	G. Irene Crawford, Director, Northeast Regional Office

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS PAGE NUMBER 2 of 5 PERMIT NUMBER MO-0124141

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until four (4) years and 364-days from the issuance of this permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

		INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Flow	MGD	*) *	once/quarter**	24 hr. estimate
Biochemical Oxygen Demand ₅ ****	mg/L		63	45	once/quarter**	grab
Total Suspended Solids****	mg/L		\sim 110	70	once/quarter**	grab
pH – Units	SU			***	once/quarter**	grab
Ammonia as N	mgL	*		*	once/quarter**	grab
Fecal Coliform	#/100ml	*		*	once/quarter**	grab
Temperature	°C	*		*	once/quarter**	grab

MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u>; THE FIRST REPORT IS DUE ______. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I & III</u> STANDARD CONDITIONS DATED <u>October 1, 1980 and August 15, 1994</u>, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

MO 780-0010 (8/91)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- * Monitoring requirement only.
- ** Sample once per quarter in the months of March, June, September, and December.
- *** pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.
- *** This facility is required to meet removal efficiency of 65% or greater.

Note 1 – Final limitations and monitoring requirements for Fecal Coliform are applicable only during the recreational season from April 1 through October 31.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

PAGE NUMBER 3 of 5

PERMIT NUMBER MO-0124141

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective one (1) day before the date of expiration of this permit and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT	LIMITS	UNITS FINAL EFF		TATIONS	MONITORING REQUIREMENTS	
PARAMETER(S)	UNITS	DAILY MAXIMU M	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001		^				
Flow	MGD			*	once/quarter**	24 hr. estimate
Biochemical Oxygen Demand ₅ ****	mg/L			45	once/quarter**	grab
Total Suspended Solids****	mg/L		110	70	once/quarter**	grab
pH – Units	st	***		***	once/quarter**	grab
Ammonia as N	mg/L	*		*	once/quarter**	grab
Fecal Coliform (Note 1)	#/100mL	1000		400	once/quarter**	grab
Temperature	°C	*		*	once/quarter**	grab

MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u>; THE FIRST REPORT IS DUE <u>DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.</u>

THERE SHALL BE NO

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- * Monitoring requirement only.
- ** Sample once per quarter in the months of March, June, September, and December.
- *** pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.
- **** This facility is required to meet removal efficiency of 65% or greater.

Note 1 – Final limitations and monitoring requirements for Fecal Coliform are applicable only during the recreational season from April 1 through October 31.

C. SPECIAL CONDITIONS

- 1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
 - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
 - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - (2) controls any pollutant not limited in the permit.
 - (b) Incorporate new or modified effluent limitations or other conditions, if the result of awaste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
 - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

- 2. All outfalls must be clearly marked in the field
- 3. Permittee will cease discharge by connection to areawide wastewater treatment system within 90 days of notice of its availability.
- 4. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
 - (1) One hundred micrograms per liter (100 μ g/L);
 - (2) Two hundred micrograms per liter (200 μg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 μg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
 - (4) The level established in Part A of the permit by the Director.
- (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.
- 5. Report as no-discharge when a discharge does not occur during the report period.

6. Water Quality Standards

- (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
- (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
 - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
 - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses:
 - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
 - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
 - (5) There shall be no significant human health hazard from incidental contact with the water;
 - (6) There shall be no acute toxicity to livestock or wildlife watering;
 - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
 - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

C. <u>SPECIAL CONDITIONS</u> (continued)

- 7. Sludge and Biosolids Use For Domestic Wastewater Treatment Facilities
 - (a) Permittee shall comply with the pollutant limitations, monitoring, reporting, and other requirements in accordance with the attached permit Standard Conditions.
 - If sludge is not removed by a contract hauler, Permittee is authorized to land apply biosolids that are removed from the domestic wastewater treatment lagoon during lagoon clean-out and maintenance activities. Permit Standard Conditions, Part III shall apply to the land application of biosolids. Permittee shall notify the department at least 180 days prior to the planned removal of biosolids from the lagoon. The department may require submittal of a biosolids management plan for department review and approval as determined appropriate on a case-by-case basis.

D. <u>SCHEDULE OF COMPLIANCE</u>

- 1. The final daily maximum and monthly average Pecal Coliforn limits of 400/100ml and 1000/100ml, respectively, shall become effective one day prior to the expiration date of the permitter December 31, 2013, whichever comes first unless items b or c below are approved by the Department. The Effluent Regulation, 10 CSR 20 7.015(9)(H), allows the permittee up to five years from the issuance date of this permit to:
 - a. Install disinfection facilities, or
 - b. Present an evaluation to show that disinfection is not required to protect one or both recreational uses, or;
 - c. Present a Use Attainability Analysis (UAA) that demonstrates one or both designated recreational uses are not attainable in the classified waters receiving the effluent.
- 2. If chlorination is the chosen method of disinfection, a Total Residual Chlorine limit will be added to the permit.

Date of Fact Sheet: July 25, 2006

Date of Public Notice: August 25, 2006

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FACT SHEET

This Fact Sheet explains the applicable regulations, rationale for development of this permit and the public participation process.

NPDES PERMIT NUMBER: MO-0124141

FACILITY NAME: MFA Agri Service-Cedar Creek

OWNER NAME: MFA Incorporated

LOCATION: SW 1/4, NW 1/4, NW 1/4, Sec. 11. T48N, R11W, Callary County

RECEIVING STREAM: Unnamed (ributary to Cedar Creek (C) (00737) 303(d)

FACILITY CONTACT PERSON: Mr. Rick Smith TELEPHONE: (573) 474-2111

FACILITY DESCRIPTION Warehouse – SIC #4952

Two-cell lagoon / Sludge retain in lagoon
Design population equivalent is 3.
Design flow is 150 gallons per day.
Design sludge production is 0.045 dry tons/year.

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollutant Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of storm water from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Permits in Missouri are issued by the Director of the Department of Natural Resources under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended).

10 CSR 20-7.031 Missouri Water Quality Standards, Missouri Department of Natural Resources (the Department) "defines the Clean Water Commission water quality objectives in terms of water uses to be maintained and the criteria to protect those uses." The receiving stream's beneficial water uses to be maintained are livestock and wildlife watering, protection of aquatic life, and Whole Body Contact Recreation.

To protect these beneficial uses and the water quality of the receiving stream, effluent limitations are being established under federal and state laws.

EFFLUENT LIMIT DERIVATION & RATIONALE

A Water Quality Review Sheet was developed for this facility. Cedar Creek is an impaired stream and is listed as a 303 (d) stream. A Total Maximum Daily Load (TMDL) information sheet was established for Cedar Creek in Callaway County. Permit limits for five-day Biochemical Oxygen Demand and Total Suspended Solids have been retained from the previous permit. A change in the pH limits was included due to the TMDL. Cedar Creek is on the B list for Whole Body Contact Recreation. A Use Attainability Analysis study has not been conducted on Cedar Creek. The facility is less than two (2) miles from Cedar Creek, therefore Fecal Coliform monitoring and limits were included in the effluent requirements for this permit. A five-year schedule of compliance is included in the permit to allow for the facility to comply with the fecal coliform requirements. Monitoring for ammonia and temperature has been added due to the adoption of the U. S. Environmental Protection Agency's "1999 Update of Ambient Water Quality Criteria for Ammonia".

This permit will be issued for a period of <u>five</u> years.



Missouri Department of Natural Resources Water Protection Program NPDES PERMITS AND ENGINEERING SECTION

Water Quality Review Sheet

FACILITY INFORMATION FACILITY NAME: MFA Agri Service PPDES # MO-0124141 FACILITY TYPE/DESCRIPTION: 150 gpd 2 cell domestic lagoon serving a warehouse EDU*: OML *- Ecological Drainage Unit LEGAL DESCRIPTION: SW ¼, NW ¼, NW ¼, Sec. 11, T48N, LATITUDE/LONGITUDE: +3857365/-09207563 R11W WATER QUALITY HISTORY: No discharges reported from this facility.

OUTFALL	DESIGN FLOW (CFS)	Treatment Level	RECEIVING WATERBODY	APPROXIMATE DISTANCE TO CLASSIFIED SEGMENT (MI)
001	0.0002	Equivalent to Secondary	Unnamed tributary to Cedar Creek	0.82

RECEIVING WATERBODY INFORMATION

WATERBODY NAME	CLASS	s WBID	Low-Flow Values (CFS)			DESIGNATED USES**
WITERBODT TWEETE	CLASS		1Q10	7Q10	30Q10	DESIGNATED CSES
Unnamed tributary to Cedar Creek	U		0.0	0.00	0.0	General Criteria
Cedar Creek, 303(d)	С	0737	0.0	0.0	0.1	LWW, AQL, WBC

^{**} Irrigation (IRR), Livestock & Wildlife Watering (LWW), Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL), Cool Water Fishery (CLF), Cold Water Fishery (CDF), Whole Body Contact Recreation (WBC), Secondary Contact Recreation (SCR), Drinking Water Supply (DWS), Industrial (IND)

COMMENTS: Cedar Creek is on the 303(d) list for low pH and Sulfates from acid mine drainage. This facility is

not a significant source of sulfates. The effluent limit for pH is adjusted to 6.5-9.0 standard units to

comply with the TMDL.

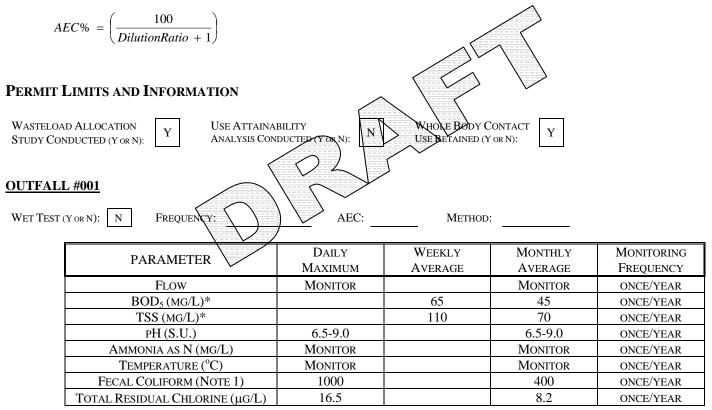
MIXING CONSIDERATIONS

Mixing Zone (MZ): Not allowed 10 CSR 20-7.031(4)(A)4.B.(I)(a)

Zone of Initial Dilution (ZID): Not allowed 10 CSR 20-7.031(4)(A)4.B.(I)(b)

Flow (c	cfs) MZ (cfs)	ZID (cfs)
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7Q10	0.0	0.0	0.0
1Q10	0.0	0.0	0.0
30Q10	0.0	0.0	N.A.



NOTE 1 – COLONIES/100 ML

* - This facility is required to meet a removal efficiency of 65% or more for BOD_5 and TSS. Influent BOD_5 and TSS data should be reported to ensure removal efficiency requirements are met.

RECEIVING WATER MONITORING REQUIREMENTS

No receiving water monitoring requirements recommended at this time.

DERIVATION AND DISCUSSION OF LIMITS

Wasteload allocations were calculated using water quality criteria or water quality model results and the dilution equation below:

$$C = \frac{\left(Cs \times Qs\right) + \left(Ce \times Qe\right)}{\left(Qe + Qs\right)}$$
 (EPA/505/2-90-001, Section 4.5.5)

Where C = downstream concentration

Cs = upstream concentration

Qs = upstream flow

Ce = effluent concentration

Qe = effluent flow

Chronic wasteload allocations were determined using applicable chronic water quality criteria (CCC: criteria continuous concentration) and stream volume of flow at the edge of the mixing zone (MZ). Acute wasteload allocations were determined

using applicable water quality criteria (CMC: criteria maximum concentration) and stream volume of flow at the edge of the zone of initial dilution (ZID).

Water quality based maximum daily and average monthly effluent limitations were calculated using methods and procedures outlined in USEPA's "Technical Support Document For Water Quality-based Toxics Control" (EPA/505/2-90-001).

Outfall #001 - Main Facility Outfall

- Biochemical Oxygen Demand (BOD₅). 45 mg/L monthly average, 65 mg/L weekly average [10 CSR 20-7.015(8)(B)3.D.(II)(a)].
- Total Suspended Solids (TSS). 70 mg/L monthly average, 110 mg/L weekly average [10 CSR 20-7.015(8)(B)3.D.(II)(a)].
- **<u>pH.</u>** pH shall be maintained in the range from six point five to nine (6.5 9) standard units as required by the TMDL for Cedar Creek.
- <u>Total Ammonia Nitrogen.</u> Monttoring to determine if reasonable potential to violate water quality standards in the receiving stream exists due to discharges from this facility.
- **Fecal Coliform** facility is within miles to a Whole Body Contact receiving stream, therefore wastewater must not contain more than a monthly geometric mean of 400 colonies per 100 milliliters and a daily maximum of 1000 colonies per 100 milliliters. [10 CSR 20-7.015(8)(B)4.A]
- <u>Total Residual Chlorine</u> Chlorine limit is to be applied only if chlorination is the chosen method of disinfection constructed at this facility. Protection of aquatic life, acute criteria 19 μ g/L, chronic criteria 10 μ g/L.

Chronic WLA:
$$C_e = ((0.0002 + 0.0)10 - (0.0 * 0.0))/0.0002$$

$$C_e = 10 \mu g/L$$

Acute WLA:
$$C_e = ((0.0002 + 0.0)19 - (0.0 * 0.0))/0.0002$$

$$C_e = 19 \mu g/L$$

$$LTA_c = 10 \ \mu g/L \ (0.527) = 5.3 \ \mu g/L$$
 [CV = 0.6, 99th Percentile, n = 4]

$$LTA_a = 19 \ \mu g/L \ (0.321) = 6.1 \ \mu g/L$$
 [CV = 0.6, 99th Percentile]

$$MDL = 5.3 \ \mu g/L * 3.11 = 16.5 \ \mu g/L$$
 [CV = 0.6, 99th Percentile]

AML =
$$5.3 \mu g/L * 1.55 = 8.2 \mu g/L$$
 [CV = $0.6, 95^{th}$ Percentile, n = 4]

Reviewer: Curt B. Gateley

Date: 6-29-06

Unit Chief: Refaat Mefrakis

Monitoring and effluent limits contained within this document have been developed in accordance with EPA guidelines using the best available data and are believed to be consistent with Missouri's Water Quality Standards and Effluent Regulations. If additional water quality data or anecdotal information are available that may affect